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End

the attenuation properties and/or the refractive index of the waveguide being provided such that an electrical signal can be applied across the doped regions to by alter altering the density of charge carriers within the waveguide, the two doped regions each comprising a plurality of doped areas spaced apart from each other in a direction parallel to along the length of the waveguide the size and spacing of the doped areas being selected so that the efficiency of the device, in terms of the increase in attenuation or change in refractive index per unit current applied thereto, is increased.

According to a second aspect of the invention, there is provided an electro-optic device comprising a substrate and an integrated optical waveguide extending across the substrate, wherein the waveguide comprises a series of two or more curved portions curving in alternating directions, each having an n-doped region adjacent the outer side of the curved portions and a p-doped region on the inner side thereof so as to form a series of diodes of alternating polarity along the length of the waveguide. , at least one portion of the waveguide being curved, two doped regions being provided such that an electrical signal can be applied across the doped regions to alter the density of charge carriers within the curved portion of the waveguide.
